

Two new species of the genus *Bembecia* HÜBNER, 1819 from Middle Asia

(Lepidoptera, Sesliidae)

by

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Abstract: Two new species of the genus *Bembecia* are described: *Bembecia tsvetajevi* spec. nov. (Turkmenia, Ashkabad) and *B. rushana* spec. nov. (Tadjikistan, W-Pamir, Yazgulem Mts.), deriving from the collections of the Zoological Museum of Moscow and the Zoological Museum of Kiev State University, respectively.

Bembecia tsvetajevi spec. nov. (figs. 1-5)

Holotype ♂: Middle Asia, Turkmenia, Ashkabad, 15.VIII.1928, leg. P. DONOV.

Paratypes: 12 ♂♂, 5 ♀♀, same locality and date, leg. P. DONOV.

The types are deposited in the collection of the Zoological Museum of the Moscow State University.

Description Holotype ♂:

Body length 18.0; forewing 12.0; antenna 9.3 mm.

Head: labial palps pale yellow with a narrow black strip posteriorly, ventrally covered by long hairy-like scales; antenna yellow-orange with a black apical quarter; frons pale yellow; vertex black; pericephalic hairs yellow.

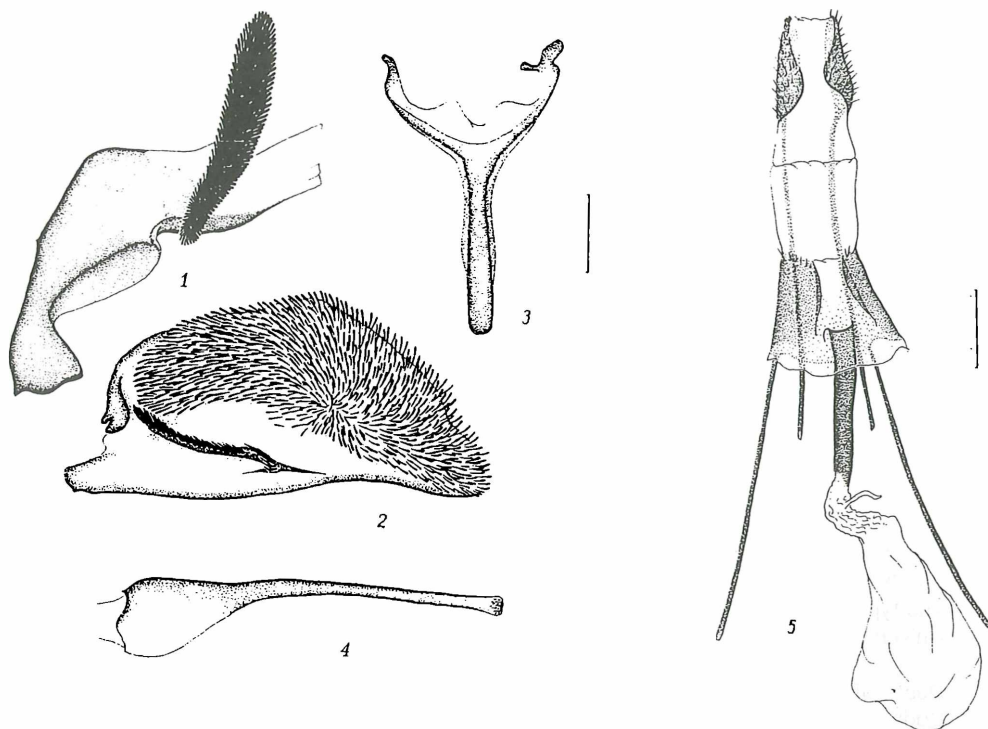
Thorax: paragia black dorsally and yellow laterally; tegula black with a yellow top and a yellow spot near base of forewing; meso- and metathorax black, covered with long, hairy-like yellow scales; pleura of thorax black with admixture of yellow scales.

Legs: fore coxa black with a narrow yellow strip posteriorly, covered by long, hairy-like yellow scales; hind tibia yellow with a very narrow black ring near base of apical spurs; spurs yellow.

Forewing: costal margin, discal spot, Cu-stem, veins 4, R5, M3 and Cu1 dark brown; anal margin, veins M1 and M2 yellow; apical area extremely narrow, consisting of one or two rows of yellow scales; discal spot about thrice as narrow as external transparent area; transparent areas well developed, covered by colourless scales.

Hindwing: transparent; veins brown (M2, A1 and A2 yellow); discal spot dark brown, triangular, reaching to base of veins M3-Cu1.

Abdomen: black, covered by long, hairy-like yellow scales; tergite no. 2 with a very narrow, distal yellow strip; distal half of tergites nos. 4-7 yellow; sternite no. 2 black, nos. 3-7 with a very broad, yellow, distal strip; anal tuft black with a yellow strip centrally and laterally.



Figs. 1-4: Male genitalia of *Bembecia tsvetajevi* spec. nov., paratype. 1) tegumen-uncus complex; 2) valva; 3) saccus; 4) aedoeagus. Scale bar: 0.5 mm.

Fig. 5: Female genitalia of *Bembecia tsvetajevi* spec. nov., paratype. Scale bar: 0.5 mm.

Female: From the 5 females which I have at hand, three are similar to the holotype and the other males in colouration, but the other two females differ very much in colour pattern. They are completely dark brown to black, with yellow frons and pericephalic hairs and besides that, the hindwings are entirely covered by black scales.

Variability: expressed only as individual size variation: body length 11.5-18.5; forewing 10.0-12.5; antenna 5.9-9.5 mm.

Genitalia (male): tegumen-uncus complex (fig. 1) relatively narrow (width-length ratio 2.5:8.0); scopula androconialis well developed; crista gnathi medialis absent; crista gnathi lateralis oval; valva (fig. 2) trapeziform, crista sacculi simple, long, slightly curved, as a fold, dorsal edge with a row of strong and pointed setae; saccus with a small swelling subapically, slightly longer than vinculum (fig. 3); aedoeagus (fig. 4) relatively thin, slightly shorter than valva; vesica with numerous but very small cornuti.

Genitalia (female) (fig. 5): 8th tergite narrow; apophysis posterior as long as apophysis anterior; ostium bursae narrow; antrum straight, well sclerotized, about twice as short as apophysis anterior; ductus bursae twice as short as antrum; bursa copulatrix oval, without signum.

Differential diagnosis: The dark female form of this new species is very similar to the females of *B. dispar* (STAUDINGER, 1890), but differs from it by the black colour of both labial palp and vertex. The male of *B. tsvetajevi* psec. nov. is similar to *B. dispar* and *B. syzjovi* GORBUNOV, 1989. From the first species, *B. tsvetajevi* spec. nov. can be distinguished by the black colouration of both costal margin and discal spot of the forewing, as well as by the black 2nd tergite of the abdomen (in *B. dispar* with yellow scales). From the other species *B. tsvetajevi* spec. nov. is distinguishable by the yellow-orange antenna (black in *B. syzjovi*) and by the colour of both hind tibia and abdomen. These three very closely related species have similar genitalia in the male, differing only in small details of the shape of the crista gnathi medialis, valva and crista sacculi. However, these species have different distributions, with *B. dispar* known from NW-Africa (Algeria, Tunisia), *B. syzjovi* from the Transcaucasus (SW-Georgia), and *B. tsvetajevi* from Turkmenia.

Bionomics and habitat: unknown.

Distribution: Middle Asia, Turkmenia, Ashkabad.

Etymology: It is with great pleasure that I name this beautiful new species after A. V. TSVETAJEV, the famous amateur lepidopterologist, who devoted his life to studies on the lepidoptera of the USSR.

Bembecia rushana spec. nov. (figs. 6-10)

Holotype ♂: Middle Asia, Tadjikistan, W-Pamir, Yazgulem Mts., Tavdara, 3300-3400m alt., 29.VII.1937, leg. L. SHELJUZHKO & N. PAVLITZKAJA.

Paratype ♀: same locality and date, leg. L. SHELJUZHKO & N. PAVLITZKAJA.

The types are deposited in the collection of the Zoological Museum of the Kiev State university.

Description Holotype ♂

Body length 12.0; forewing 9.0; antenna 6.0 mm.

Head: labial palp dark brown with a yellow strip posteriorly, ventrally covered by long, hairy-like scales; antenna black; frons brown with a narrow yellow strip laterally; vertex black, covered by long, hairy-like, yellowish scales; pericephalic hairs yellow.

Thorax: patagia black dorsally and yellow laterally; tegula black with a small yellow spot near base of forewing; meso- and metathorax black, covered by long, hairy-like, yellowish scales; pleura of thorax black with a large yellow spot.

Legs: fore coxa black with a narrow yellow strip posteriorly, covered by long, hairy-like, yellow scales; hind tibia black with a broad yellow ring medially; spurs yellow.

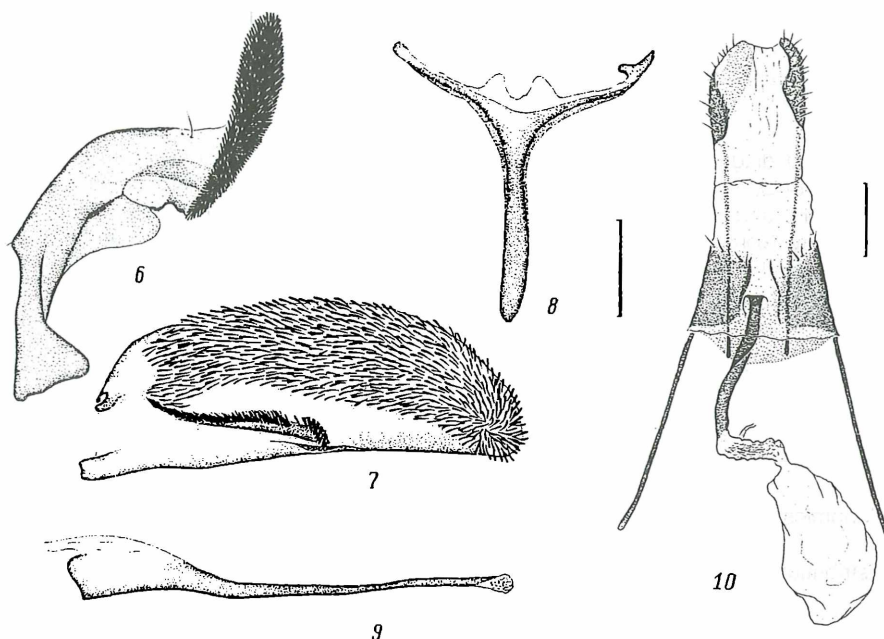


Fig. 6-9: Male genitalia of *Bembecia rushana* spec. nov., holotype. 1) tegumen-uncus complex; 2) valva; 3) saccus; 4) aedoeagus. Scale bar: 0.5 mm.

Fig. 10: Female genitalia of *Bembecia rushana* spec. nov., paratype. Scale bar: 0.5 mm.

Forewing: dark brown to black; anal margin, apical area and veins within external transparent area yellow; discal spot black with a few yellow scales distally; transparent areas small, covered by colourless scales with bluish lustre; external transparent areas long, about twice as broad as discal spot, divided into three cells; posterior transparent area absent.

Hindwing: transparent; veins yellow (veins M3, Cu1 and Cu2 black); discal spot black, triangular, reaching to base of veins M3-Cu1.

Abdomen: black, covered by long, hairy-like, yellow scales; tergite no. 2 with a narrow, yellow, distal strip; tergites nos. 4, 6 and 7 with a broad yellow strip distally; sternites nos. 4-7 with a broad yellow strip distally; anal tuft yellow with two narrow black strips at medial part dorsally.

Female: labial palpus yellow; frons yellow; patagia dorsally with admixture of yellow scales; hind tibia yellow with a narrow black ring apically transparent areas of forewing completely covered by yellow scales; hindwing completely covered by yellow scales (surface between veins M3-Cu2 dark brown); tergites nos. 2, 4 and 6 of abdomen with a wider yellow strip distally; sternites nos. 4-6 yellow; anal tuft yellow centrally and black laterally.

Variability: unknown.

Genitalia (male): tegumen-uncus complex (fig. 6) relatively narrow (width-length ratio 1.0:3.0); scopula androconialis well developed; crista gnathi lateralis relatively small, sub-cardiform; crista gnathi medialis very small, practically absent; valva (fig. 7) oval, crista sacculi simple, long, with a small lamella ventro-caudally, saccus with a small swelling sub-apically, slightly longer than vinculum (fig. 8); aedoeagus (fig. 9) thin, as long as valva; vesica with numerous but very small cornuti.

Genitalia (female) (fig. 10): 8th tergite as broad as long; apophysis posterior slightly longer than apophysis anterior; ostium bursae narrow; antrum slightly curved, well sclerotized, about 1.5 times as short as apophysis anterior; ductus bursae half as long as antrum; bursa copulatrix oval without signum.

Differential diagnosis: Rather similar to *B. tancrei* (PÜNGELER, 1905), but differing in some important details of both habitus and male genitalia. The female of *B. tancrei* has a well-developed external transparent area, black scales at the veins within the apical area of the forewing, and a yellow discal spot of the hindwing. In the male genitalia, the new species can be easily distinguished from *B. tancrei* by the shape of both crista gnathi medialis (large in *B. tancrei*) and crista sacculi.

Bionomics and habitat: unknown.

Distribution: Middle Asia, Tadjikistan, W-Pamir, Yazgulem Mts.

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